# DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**1N4933 THRU 1N4937**

## *TECHNICAL SPECIFICATIONS OF FAST RECOVERY RECTIFIER*

*VOLTAGE RANGE - 50 to 600 Volts* *CURRENT - 1.0 Ampere*

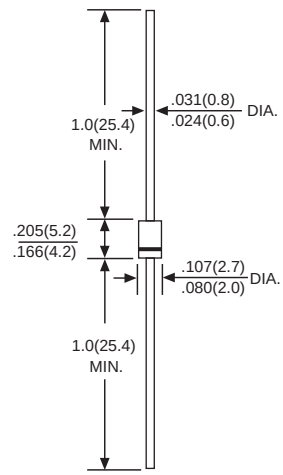
### FEATURES

* Fast switching
* Low lwakage
* Low forward voltage drop
* High current capability
* High current surge
* High reliability

### MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rated flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 0.33 gram approx.

DO-41




Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| | SYMBOL | 1N4933 | 1N4934 | 1N4935 | 1N4936 | 1N4937 | UNITS |
|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | Volts |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | Volts |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | Volts |
| Maximum Average Forward Rectified Current at $T_A$ = 55°C | $I_O$ | 1.0 | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 30 | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 1.0A DC | $V_F$ | 1.3 | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A$=25°C | $I_R$ | 5.0 | | | | | µAmps |
| Maximum Full Load Reverse Current Average, Full Cycle .375"(9.5mm) lead length at $T_L$ = 55°C | | 100 | | | | | |
| Maximum Reverse Recovery Time (Note 1) | trr | 150 | | | | 250 | nSec |
| Typical Junction Capacitance (Note 2) | $C_J$ | 15 | | | | | pF |
| Operating and Storage Temperature Range | $T_J$, $T_{STG}$ | -65 to +150 | | | | | °C |

NOTES : 1. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0 volts

# RATING AND CHARACTERISTIC CURVES (1N4933 THRU 1N4937)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

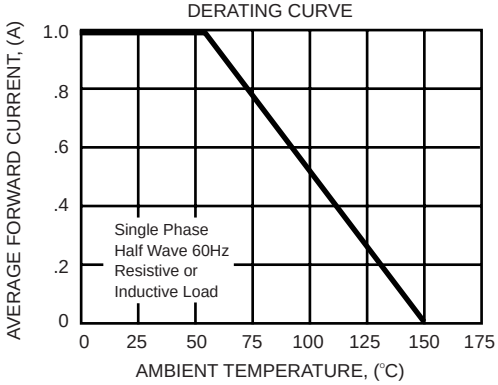



FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

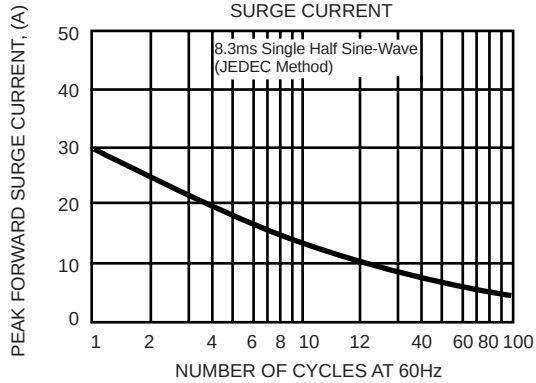



FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

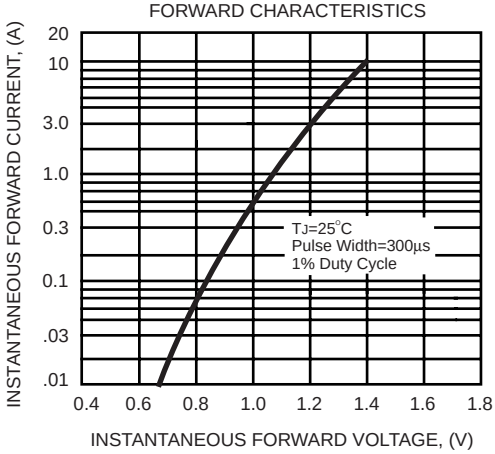



FIG. 4 - TYPICAL JUNCTION CAPACITANCE

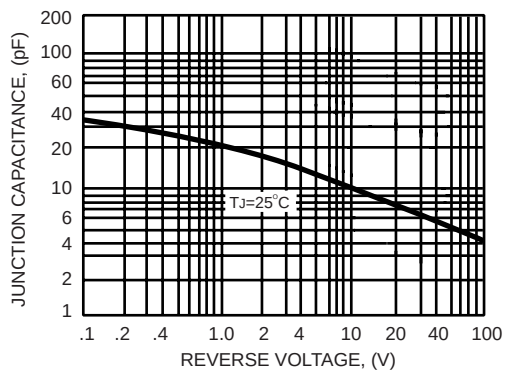
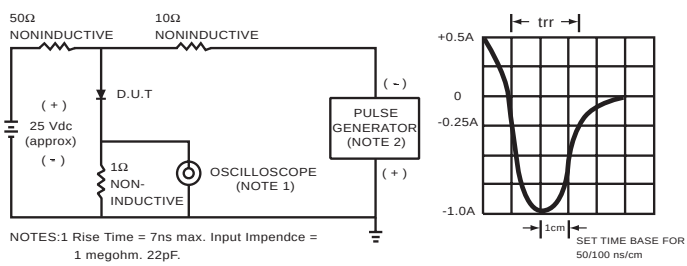



FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARAC TERISTIC




NOTES:1 Rise Time = 7ns max. Input Impendce = 1 megohm. 22pF.
2 Rise Time = 10ns max. Souce Impendce = 50 ohms.

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